

District 10 Mobility Performance Report

2019 Fourth Quarter

DEPARTMENT OF TRANSPORTATION

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District 10 Mobility Performance Report

2019 Fourth Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 10 contains eight counties located within the Central Valley (San Joaquin / Stanislaus / Merced) and the Sierra Nevada (Amador / Calaveras / Tuolumne / Mariposa / Alpine). Over the years detection in Alpine and Calaveras Counties has been sparse, so the District 10 Mobility Performance Report (MPR) no longer includes these two counties in the quarterly or annual analysis.

The MPR quarterly analysis compares information in the current quarter to that of the previous quarter and the quarter one year prior. The following are the performance measures reported in the MPR:

- Vehicle Miles Traveled (VMT)
- Vehicle Hours of Delay (VHD)
- Lost Lane Miles (LLM)
- Detector Health (DH)

This information is based on data collected every day of the quarter, twenty-four hours a day, by automated vehicle detector stations deployed on urban-area freeways where congestion is regularly experienced. The MPR presents congestion information at two speed thresholds: delay from vehicles traveling below 35 miles per hour (mph), and delay from vehicles traveling below 60 mph. The delay at the 35 mph threshold represents severe congestion while delay at 60 mph represents all congestion, both light and heavy. These thresholds are set by Caltrans and are based upon engineering experience and District input.

FINDINGS

In the fourth quarter, total delay equaled 733 thousand vehicle hours of delay (VHD) at the 35 mph speed threshold and 2.1 million VHD at the 60 mph threshold. Compared to the same quarter the

year before, there was a 41.7 percent increase in 35 mph quarterly delay and 36.1 percent increase in 60 mph quarterly delay. The average weekday delay experienced in this quarter was approximately 10,394 VHD at 35 mph and 29,657 VHD at 60 mph. The increased delay numbers can mainly be attributed to an 18 percent increase in the number of good detectors and -40% percent decrease in the number of bad detectors compared to the fourth quarter of 2018, one year ago.

The following District 10 projects are currently being constructed or are scheduled for construction effective January 2019. These current and future (planned) projects will further relieve congestion in District 10:

MERCED COUNTY

MER 99 NB LIVINGSTON MEDIAN WIDENING; EA 10-0Q121

Lane widening from 2 to 3 lanes

Approve Construction Contract Date – 08/01/2021

End Project – 10/02/2023

MER 99 SB LIVINGSTON MEDIAN WIDENING; EA 10-0Q122

Lane widening from 2 to 3 lanes

Approve Construction Contract Date – 01/19/2019

End Project – 10/01/2021

MER 152 – LOS BANOS BYPASS SEGMENT I; EA 10-41911

Convert 4 lane expressway to 6 lane freeway

Approve Construction Contract Date – 05/15/2018

End Project – 10/01/2020

SAN JOAQUIN COUNTY

SJ 4 RAMP METERING IMPROVEMENTS; EA 10-1F180

Install ramp meters along SR 4 between the I-5 and SR 99 Connectors

Currently in PRS/PDS; PA&ED Scheduled for mid-2016

End Project – Estimated to be mid 2020

SJ 120 RAMP METERING IMPROVEMENTS; EA 10-1F040

Install ramp meters along SR 4 between the I-5 and SR 99 Connectors

Currently in PRS/PDS; PA&ED Scheduled for mid-2016

End Project – Estimated to be mid 2020

I-205 SMART CORRIDOR PHASE 2; EA 10-1C330

Install ramp meters and ITS elements along I205 from MacArthur to Grant Line Road

Currently in PA&ED

End Project – 11/01/2020

I-205 – MOUNTAIN HOUSE PARKWAY INTERCHANGE PROJECT; EA 10-1E210

Improve the I-205 – Mountain House Parkway Interchange to accommodate planned future growth in and around the City of Tracy

Currently in PA&ED

End Project – Estimated mid 2022

I-580 – PATTERSON PASS ROAD INTERCHANGE PROJECT; EA 10-1E220

Improve the I-205 – Patterson Pass Road Interchange to accommodate planned future growth in and around the City of Tracy

Currently in PA&ED

End Project – Estimated mid 2022

I-205 – LAMMERS ROAD / 11TH STREET INTERCHANGE PROJECT; EA 10-0H910

Construct the I-205 – Lammers Road / 11th Street Interchange to accommodate planned future growth in and around the City of Tracy

Currently in PA&ED

End Project – Estimated mid 2022

STANISLAUS COUNTY

STA 99 / SJ 99 RAMP METERING & MAINLINE IMPROVEMENTS; EA 10-1C300

Improve Mainline and Ramp Operations; Standardize Structure Clearance; Add Auxiliary Lane

Currently in PA&ED

End Project – Estimated to be mid 2020

The above capacity increasing, ramp metering, interchange improvement, and interchange construction projects are located on the routes, in the cities, and in the counties that experience the most congestion in District 10. It is expected that the projects will help increase the Vehicle Miles Traveled while reducing congestion and delay as the population and demand in District 10 grows over the next 10 years.

The next section of this report summarizes the District 10 2019 Q4 Quarterly Mobility Statistics.

Measure	Graph	Percentage Change							
Vehicle Miles of Travel (VMT)	<p>Miles (Billions)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2018</td><td>1.6</td></tr> <tr><td>2019</td><td>1.8</td></tr> </table>	Year	Q4	2018	1.6	2019	1.8	Over one year ago	Over last quarter
		Year	Q4						
2018	1.6								
2019	1.8								
		14.7%	-3.4%						
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2018</td><td>517</td></tr> <tr><td>2019</td><td>733</td></tr> </table>	Year	Q4	2018	517	2019	733	Over one year ago	Over last quarter
		Year	Q4						
2018	517								
2019	733								
		41.7%	2.5%						
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2018</td><td>7,222</td></tr> <tr><td>2019</td><td>10,394</td></tr> </table>	Year	Q4	2018	7,222	2019	10,394	Over one year ago	Over last quarter
		Year	Q4						
2018	7,222								
2019	10,394								
		43.9%	6.5%						
Total Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2018</td><td>1.5</td></tr> <tr><td>2019</td><td>2.1</td></tr> </table>	Year	Q4	2018	1.5	2019	2.1	Over one year ago	Over last quarter
		Year	Q4						
2018	1.5								
2019	2.1								
		36.1%	-2.6%						
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q4</th></tr> <tr><td>2018</td><td>22</td></tr> <tr><td>2019</td><td>30</td></tr> </table>	Year	Q4	2018	22	2019	30	Over one year ago	Over last quarter
		Year	Q4						
2018	22								
2019	30								
		36.4%	1.9%						

Measure	Graph	Percentage Change	
Average Vehicle Hours of Delay by Day of Week at 60 mph		Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		-	Monday -8.3%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		Largest Magnitude Weekday Decrease over one year ago	Largest Magnitude Weekday Decrease over last quarter
		11 PM -17.5%	3 PM -17.3%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		Largest Magnitude Saturday Decrease over one year ago	Largest Magnitude Saturday Decrease over last quarter
		9 AM -56.7%	11 AM -61%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/Holidays		Largest Magnitude Sun./Holiday Decrease over one year ago	Largest Magnitude Sun./Holiday Decrease over last quarter
		6 AM -14.6%	12 PM -68.1%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Wednesday 46%	Wednesday 8.3%
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
		4 PM 50.9%	6 AM 15.5%
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
		4 PM 107.8%	6 AM 640.4%
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		4 PM 118.5%	7 AM 534.8%

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph		Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		Mariposa -20.5% ↓ San Joaquin 42% ↑	San Joaquin -13% ↓ Stanislaus 67.7% ↑
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph		Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		PM Peak 67.6% ↑	PM Peak -6.3% ↓
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		18% ↑	0%
		Change in Bad over one year ago	Change in Bad over last quarter
		-40% ↑	2% ↓

Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2019 Q4-2018 Q4		Difference 2019 Q4-2019 Q3		Rank		
		2018 Q4	2019 Q3	2019 Q4	Absolute	Percentage	Absolute	Percentage	2018 Q4	2019 Q3	2019 Q4
I205	San Joaquin	318,808	392,171	294,577	-24,231	-7.6%	-97,594	-24.9%	1	1	1
SR99	Stanislaus	130,683	86,857	191,063	60,381	46.2%	104,207	120.0%	2	4	2
I580	San Joaquin	41,136	27,322	108,957	67,821	164.9%	81,635	298.8%	5	7	3
I5	San Joaquin	54,429	95,507	99,537	45,108	82.9%	4,030	4.2%	3	3	4
SR99	San Joaquin	43,790	112,480	81,795	38,005	86.8%	-30,685	-27.3%	4	2	5
SR4	San Joaquin	26,637	43,217	30,513	3,876	14.6%	-12,703	-29.4%	6	5	6
SR120	San Joaquin	8,379	26,519	25,581	17,202	205.3%	-938	-3.5%	9	8	7
SR132	Stanislaus	21,444	40,072	24,585	3,141	14.6%	-15,488	-38.6%	7	6	8
SR99	Merced	7,505	15,936	17,464	9,958	132.7%	1,528	9.6%	10	9	9
I5	Stanislaus	11,010	9,922	12,872	1,862	16.9%	2,950	29.7%	8	10	10
SR132	San Joaquin	2,822	7,443	6,638	3,816	135.2%	-805	-10.8%	13	11	11
SR12	San Joaquin	1,770	5,506	5,800	4,031	227.8%	294	5.3%	14	12	12
SR219	Stanislaus	4,799	1,805	4,017	-782	-16.3%	2,212	122.6%	11	16	13
SR108	Tuolumne	333	5,217	3,568	3,235	972.6%	-1,649	-31.6%	18	13	14
I5	Merced	2,890	2,198	782	-2,107	-72.9%	-1,416	-64.4%	12	14	15
SR165	Merced	138	2,068	696	558	403.5%	-1,372	-66.3%	19	15	16
SR49	Mariposa	587	239	467	-121	-20.5%	228	95.4%	17	19	17
SR16	Amador	1	298	201	200	28628.6%	-97	-32.4%	21	18	18
SR49	Tuolumne	0	20	75	75		54	266.7%		22	19
SR152	Merced	798	93	35	-763	-95.6%	-58	-62.4%	16	20	20
SR124	Amador	1	82	15	14	1985.7%	-67	-82.1%	21	21	21
SR104	Amador	1	4	3	2	314.3%	-1	-29.3%	21	23	22
SR88	Amador	3	0	1	-2	-71.4%	1		20		23
SR120	Stanislaus	0	0	0	0		0				
SR120	Tuolumne	955	1,729	0	-955	-100.0%	-1,729	-100.0%	15	17	
TOTALS		678,916	876,703	909,241	230,324	33.9%	32,537	3.7%			